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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,683	08/31/2006	Hyunsil Han	196034542	4626
26774 7590 04/23/2010 NIXON PEABODY LLP - PATENT GROUP 1100 CLINTON SQUARE ROCHESTER, NY 14604				
EXAMINER				
JAVANMARD, SAHAR				
ART UNIT		PAPER NUMBER		
1627				
MAIL DATE		DELIVERY MODE		
04/23/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/575,683

**Applicant(s)**

HAN ET AL.

**Examiner**

SAHAR JAVANMARD

**Art Unit**

1627

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) 1-23, 25-31, 45 and 47-48 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 24 and 44 is/are rejected.
- 7) ☒ Claim(s) 32-43 and 46 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB06)  
Paper No(s)/Mail Date 7/10/06
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ ~~Notes of Informal Patent Application~~
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Status of the Application***

This Office Action is in response to applicant's arguments filed on December 15, 2009. Claim(s) 1-48 are pending. Claim(s) 1-23, 25-31, 45 and 47-48 are withdrawn. Claim(s) 24, 32-44 and 46 are examined herein.

### ***Response to Arguments***

The Picciola reference in the IDS has been considered.

Applicant's arguments with respect to the 103(a) rejection of claims 24 and 44 as being unpatentable over Yamamoto (WO 2003024446) as evidenced by the Medilexicon medical dictionary (<http://www.medilexicon.com/medicaldictionary.php?t=13063>) in view of Mitchell (US Patent No. 5,462, 946) have been fully considered but are not persuasive.

Applicant argues that more than just the English translation of the abstract of the Yamamoto reference is relied upon. In response to this argument, Examiner has included a computer translation of the Yamamoto reference.

Furthermore, Applicant argues that the combination of Yamamoto, Medilexicon, and Mitchell teach away from the conclusion treating ischemia *would not* inhibit neutrophil degranulation in or bacterial killing by neutrophils. In fact, the combination of references suggested by the PTO teaches away from such a conclusion and the compounds *would affect* neutrophil degranulation in or bacterial killing by neutrophils.

Applicant respectfully notes that with respect to the claim limitation, "without inhibiting neutrophil degranulation in or bacterial killing by neutrophils", it would be obvious that because Yamamoto teaches the same compounds, the limitation would necessarily be met as this limitation is a property associated with the compound. If the compound is the same, then it will possess this property.

In view of the foregoing arguments, the instant rejection is hereby maintained and is restated in the Final Office action below.

With respect to allowable subject matter, the Examiner notes that in claim 24, compounds 4 and 5 were found free of the art and therefore the search was expanded to search the remaining species in Group IV, namely compound 1, which was elected in the restriction requirement. It is noted that claims associated with compounds 4 and 5, specifically claims 34-41 were rejoined as the instant compounds were found free of the art. Allowable subject matter is indicated in the conclusion section of this Office action.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 24 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto (WO 2003024446) as evidenced by the Medilexicon medical dictionary (<http://www.medilexicon.com/medicaldictionary.php?t=13063>) in view of Mitchell (US Patent No. 5,462, 946).

Yamamoto teaches oxidation stress inhibitors containing as the active ingredient a pyrazolone derivative represented by the formula (I) or its pharmaceutically acceptable salt [wherein  $R^1 = H$ , aryl, C1-5 alkyl, C3-6 alkoxy carbonylalkyl (Applicant's  $R^2$  of compound 1);  $R^2 = H$  (H in Applicant's compound 1);  $R^3 = H$ , C1-5 alkyl, C5-7 cycloalkyl, C1-3 hydroxyalkyl, benzyl, naphthyl, Ph optionally substituted (Applicant's  $R^1$ ). Yamamoto teaches that the instant drugs are useful as a remedy for various oxidation stress diseases (for example, ischemic diseases and various diseases depending thereon, namely, cerebrovascular diseases such as brain infarction and

brain attack, brain hypofunction and vascular dementia caused thereby, various brain diseases in association with aging such as cerebrovascular tissue lesion, various peripheral circulatory disorders based on cardiomuscular ischemia such as cardiomuscular infarction and heart failure, liver failure, and diabetes) (abstract).

Yamamoto does not specifically teach inhibiting respiratory bursts.

According to the definition provided by the Medilexicon medical dictionary, respiratory burst is the marked increase in metabolic activity that occurs in phagocytes and certain other cells following binding of particles resulting in an increase in oxygen consumption, formation of superoxide anion and formation of hydrogen peroxide.

Mitchell teaches that free radical have been implicated in ischemia/reperfusion injury, and have been important in neutrophil-mediated toxicity of foreign pathogens (column 1, lines 58-64).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have known that the pyrazole compounds taught by Yamamoto would also be effective in treating respiratory bursts as they relate to neutrophils. Yamamoto teaches the treatment of ischemic diseases. Based on the teachings of Mitchell, it would have been obvious to have known that in fact ischemic injuries are important in neutrophil-mediated toxicity of foreign pathogens and the instant compounds would necessarily treat respiratory bursts. With respect to the claim limitation, "without inhibiting neutrophil degranulation in or bacterial killing by neutrophils", it would be obvious that because Yamamoto teaches the same compounds, the limitation would

necessarily be met as this limitation is a property associated with the compound. If the compound is the same, then it will possess this property.

Thus in view of the foregoing arguments, the instant claims are deemed to be unpatentable over the cited art.

### ***Conclusion***

Claims 24 and 44 are not allowed.

Claims 32, 33, 34-41 and 42-43 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SAHAR JAVANMARD whose telephone number is (571) 270-3280. The examiner can normally be reached on 8 AM-5 PM MON-FRI (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreeni Padmanabhan can be reached on (571) 272-0629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/S. J./

Examiner, Art Unit 1627

/Shengjun Wang/

Primary Examiner, Art Unit 1627



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